DOCUMENT RESUME

ED 268 298 CE 044 141

TITLE Commercial Fishing.
INSTITUTION Florida State Dept. of Education, Tallahassee. Div. of Vocational Education.
PUB DATE 86
NOTE 9p.
PUB TYPE Guides - Non-Classroom Use (055)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Competence; Competency Based Education; *Course Content; Course Descriptions; *Maritime Education; Occupational Information; Postsecondary Education; Seafarers; Secondary Education; State Curriculum Guides; Student Organizations; Trade and Industrial Education
IDENTIFIERS *Fishing; Fishing Industry; *Florida

ABSTRACT

This document is a curriculum framework for a program in commercial fishing to be taught in Florida secondary and postsecondary institutions. This outline covers the major concepts/content of the program, which is designed to prepare students for employment in occupations with titles such as net fishers, pot fishers, line fishers, shrimp boat deckhands; or to provide supplemental training for persons previously or currently employed in these occupations. The program outline also covers laboratory activities, student organizations, and cooperative education; and lists 14 intended outcomes for students completing the program, with student performance standards for each of the intended outcomes. (KC)

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ED268298

CURRICULUM FRAMEWORK — PROGRAM AREA: Industrial

FLORIDA DEPARTMENT OF EDUCATION — EFFECTIVE DATE: July, 1986

PROGRAM TITLE: Commercial Fishing

CODE NUMBER: Secondary 8751200 — Postsecondary MTE0998

Florida CIP IN49.030300

SECONDARY SCHOOL CREDITS ____ COLLEGE CREDITS ____ POSTSECONDARY ADULT VOCATIONAL CREDITS ____

APPLICABLE LEVELS(S): ___ 7-9 ___ 9-12 ___ Postsecondary Adult Vocational

___ Postsecondary Vocational X Other (10-12, 13-15, 21)

CERTIFICATION COVERAGE: COMM FISH 7

I. MAJOR CONCEPTS/CONTENT: The purpose of this program is to prepare students for employment with occupational titles such as net fishers (441.684-010), pot fishers (441.684-014), line fishers (442.684-010), shrimp boat deckhands (449.667-010), or to provide supplemental training for persons previously or currently employed in these occupations.

The plan of instruction prepares individuals for crew duties on seagoing boats, barges, and ships. Included are boat operation, fishing operations, cleaning and preserving, loading and unloading, and emergency procedures.

The content should include, but not be limited to, communication skills, leadership skills, human relations and employability skills, and safe and efficient work practices.

II. LABORATORY ACTIVITIES: Laboratory and onboard activities are an integral part of this program and provide instruction in the safe and efficient operation of commercial watercraft and related systems. Emphasis is placed on vessel operations and fishing techniques.

III. SPECIAL NOTE: The Vocational Industrial Clubs of America, Inc., is an appropriate vocational student organization for providing leadership training experiences and reinforcing specific vocational skills. When provided, these activities are considered an integral part of this instructional program.

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The cooperative method of instruction may be utilized for this program. Whenever the cooperative method is offered, the following is required for each student: a training plan which includes instructional objectives and a list of on-the-job and in-school learning experiences; a work station which reflects equipment, skills and tasks relevant to the occupation the student has chosen as a career goal.

When the cooperative education method of instruction is used, the program length of the secondary program may be increased by a maximum of 2.0 credits.

In accordance with Section 240.149 F.S., the minimum basic skills grade level required for this vocational program is: Mathematics 9.0, Language 9.0. This grade level number corresponds to a grade equivalent score obtained on a state designated basic skills examination.

The typical length of this program for the average achieving student is 900 contact hours (1080 clock hours).

IV. INTENDED OUTCOMES: After sucessfully completing this program, the student will be able to:

01. Dock a vessel.
02. Unlock and get a vessel underway.
03. Operate a vessel at sea.
04. Maneuver around offshore structures.
05. Anchor a vessel.
06. Perform shrimp boat deckhand duties.
07. Perform net fisher duties.
08. Perform pot fisher duties.
09. Perform line fisher duties.
10. Bring a vessel into port.
11. Perform crew operational and maintenance duties aboard a vessel in port.
12. Prepare meals aboard a vessel.
13. Plan and perform emergency procedures.
14. Demonstrate employability skills.

STUDENT PERFORMANCE STANDARDS

COMMERCIAL FISHING

01.0 DOCK A VESSEL—The student will be able to:

01.001 Assign crew members' positions for mooring a vessel
01.002 Cast off a vessel's mooring lines while remaining on the dock
01.003 Cast off a vessel's mooring lines while remaining aboard
01.004 Maneuver a vessel to the dock
01.005 Release towing gear aboard towing vessels and barges
01.006 Secure mooring lines to the dock
01.007 Secure mooring lines to a vessel
01.008 Secure the engine room
01.009 Secure the propeller shaft

02.0 UNLOCK AND GET A VESSEL UNDERWAY—The student will be able to:

02.001 Bleed an air compressor of water
02.002 Check and maintain batteries
02.003 Measure fuel in a day tank
02.004 Maintain the proper level of coolant in an expansion tank
02.005 Determine if all navigation lights are functioning
02.006 Tighten engine mounts
02.007 Inspect water-level indicators for cleanliness
02.008 Test marine radio equipment
02.009 Inspect antenna for physical damage
02.010 Determine if hydraulic steering equipment is free of air and water
02.011 Inspect fire-fighting equipment for excessive wear, proper location, and prescribed type
02.012 Inspect buoyancy apparatus for excessive wear, proper location, and prescribed type
02.013 Determine that rudder stuffing box is functioning properly
02.014 Tighten propeller stuffing box
02.015 Inspect vessel for fuel leakage
02.016 Prepare a list of equipment to be checked for oil leakage
02.017 Determine if proper voltage is being generated
02.018 Maneuver a vessel from a berth into a navigable waterway
02.019 Pump out bilges
02.020 Secure loose deck equipment
02.021 Secure watertight doors, hatches, vents, and skylights

03.0 OPERATE A VESSEL AT SEA—The student will be able to:

03.001 Act as a vessel's lookout
03.002 Determine if electrical connections and outlets are tight and dry
03.003 Determine if electrical outlets have proper voltage
03.004 Change air filters on engines

03.005 Change oil and fuel filters on engines
03.006 Change oil in an engine
03.007 Chip and paint a vessel
03.008 Clean an engine room and its equipment
03.009 Determine time of arrival when a current effect is known
03.010 Determine time of arrival when a current effect is unknown
03.011 Display day or night signals for different towing situations
03.012 Inspect heaving lines, mooring lines, and fixed and running rigging for excessive wear
03.013 Determine Greenwich Mean Time (GMT) by using a vessel's chronometer
03.014 Determine position by using the Omega navigation system
03.015 Steer a course by using a magnetic compass
03.016 Determine "distance off" by using angular measurements
03.017 Establish a vessel's dead reckoning (DR) track
03.018 Determine a vessel's position using celestial navigation
03.019 Plot a vessel's position using Loran and Loran overprint charts
03.020 Set sea watches

04.0 MANEUVER AROUND OFFSHORE STRUCTURES--The student will be able to:

04.001 Assist personnel in boarding a personnel basket
04.002 Maneuver a vessel to discharge passengers
04.003 Maneuver a vessel to discharge cargo
04.004 Secure hoses on board a vessel
04.005 Secure lashings, hawsers, or moving lines on board a vessel

05.0 ANCHOR A VESSEL--The student will be able to:

05.001 Anchor a vessel
05.002 Maneuver a vessel to an anchorage area
05.003 Anchor a vessel by using an anchor winch
05.004 Anchor a vessel by using an anchor windlass
05.005 Stack (tier) anchor chain in a chain locker

06.0 PERFORM SHRIMP BOAT DECKAND DUTIES--The student will be able to:

06.001 Stand lookout, steering, and engine-room watches
06.002 Attach nets, slings, hooks, and other lifting devices to cables, booms, and hoists
06.003 Load equipment and supplies aboard a vessel by hand or using hoisting equipment
06.004 Signal other workers to move, hoist, and position loads
06.005 Row boats and dinghies, and operate skiffs, to transport fishers and to tow and position nets
06.006 Attach accessories such as floats, weights, and markers to nets and lines
06.007 Pull and guide nets and lines onto a vessel
06.008 Remove shrimp from nets

06.009 Sort and clean marine life and return undesirable and illegal catch to the sea
06.010 Place catch in containers, then store catch in the hold and cover with salt and ice
06.011 Wash deck, conveyors, knives, and other equipment using a brush, detergent, and water
06.012 Lubricate, adjust, and make minor repairs to engines and equipment

07.0 PERFORM NET FISHER DUTIES—The student will be able to:

07.001 Catch finfish, shellfish, and other marine life alone or as a crew member aboard a fishing vessel
07.002 Use and operate equipment such as a dip, diver, gill hoop, lampara, pound, trap, reef, trammel, and travel net
07.003 Use and operate equipment such as a purse seine or a haul, drag, or beach seine
07.004 Insert and attach hoops, rods, poles, ropes, floats, weights, beam runners, other boards, and cables to form, reinforce, position, set, tow, and anchor a net
07.005 Attach flags and lights to buoys to identify net location
07.006 Put nets into the water, and anchor or tow nets according to the kind of net used, location of the fishing area, and the method of fishing
07.007 Haul nets to a boat or to shore, both manually and using a winch
07.008 Empty the catch from a net using dip nets, brail buckets, hydraulic pumps, and conveyors, and by lifting nets, using block and tackle, and dumping the catch
07.009 Store a catch in the hold and in containers, or transfer a catch to the base ship or a bigger boat
07.010 Ride in a skiff and hold the end of a net as the base ship discharges net to surround a school of fish or other seafood
07.011 Sort and clean fish
07.012 Repair fishing nets and gear
07.013 Act as lookout or observe instruments to sight schools of fish

08.0 PERFORM POT FISHER DUTIES—The student will be able to:

08.001 Fish for marine life, including crab, eel, or lobster, using pots (cages with funnel-shaped net openings)
08.002 Tie marker floats to lines, attach lines to pots, fasten bait inside a pot, and lower pots into the water
08.003 Hook marker floats with a pole and pull up pots
08.004 Reach through the hinged door of a pot to remove the catch or dump the catch on the deck
08.005 Measure a catch with a fixed gauge to insure compliance with legal size
08.006 Place a legal catch in containers and toss illegal catch overboard

08.007 Place pegs in the hinges of claws to prevent lobsters in containers from killing each other

08.008 Rig and lower dredges (rake scoops with a bag net attached), drag a dredge behind a boat to gather marine life from the water bottom, and hoist a dredge to the deck by hand using block and tackle

09.0 PERFORM LINE FISHER DUTIES--The student will be able to:

09.001 Catch fish and other marine life with hooks and lines, working alone or as a member of a crew

09.002 Lay out line and attach hooks, bait, sinkers, and various anchors, floats, and swivels, depending on the quarry sought

09.003 Put line into the water and hold, anchor, or troll (tow) line to catch fish

09.004 Haul line onto the boat deck by hand, reel, or winch, and remove the catch

09.005 Store catch in hold or boxes, and pack catch in ice

09.006 Hit fish with a club to stun them before removing the catch from the hook

09.007 Use a gaff to assist in hauling fish from the water

09.008 Slit a fish, remove the viscera, and wash the cavity to clean the fish for storage

09.009 Steer a vessel in a fishing area

10.0 BRING A VESSEL INTO PORT--The student will be able to:

10.001 Determine a vessel's approximate position and locate hazardous bottom conditions by using a pathometer

10.002 Determine a vessel's position by using a radio direction finder (RDF)

10.003 Inspect engine room equipment for proper maintenance and safety

10.004 Determine a vessel's course and position against dead reckoning plots

10.005 Correct a nautical chart prior to departure

10.006 Prepare a vessel to take on fuel and lube oil

10.007 Prepare to take on water aboard a vessel

11.0 PERFORM CREW OPERATIONAL AND MAINTENANCE DUTIES ABOARD A VESSEL IN PORT--The student will be able to:

11.001 Arrange for dry-docking a vessel

11.002 Change brushes in auxiliary engines

11.003 Change lube oil filters on auxiliary engines

11.004 Change fuel filters on auxiliary engines

11.005 Determine if motor bearings are excessively worn

11.006 Clean an electric motor

11.007 Prepare a list of hoses, valves, connections, gaskets, and tanks needing repairs

11.008 Determine if the regulator on a constant-voltage generator is functioning properly
11.009 Determine if the drive bolts on air compressors are excessively loose
11.010 Tighten panel box fittings to prevent vibration
11.011 Clean keel cool strainers
11.012 Clean oil coolers
11.013 Clean oil strainers in marine gears
11.014 Drain water out of fuel traps
11.015 Tighten fuel- and oil-line connections on engines
11.016 Inspect day tanks containing fuel for leaks
11.017 Lubricate deck and engine-room equipment on a regular schedule
11.018 Determine a vessel's manning requirements
11.019 Splice an eye into a line
11.020 Wash down a vessel's superstructure and decks

12.0 PREPARE MEALS ABOARD A VESSEL--The student will be able to:

12.001 Make yeast breads
12.002 Make pie crust
12.003 Make cream filling for pie
12.004 Make pancakes
12.005 Make corn bread
12.006 Make cakes
12.007 Make biscuits
12.008 Clean the deck, woodwork, and cabinets in a galley
12.009 Wash dishes, glasses, flatware, trays, pots, and pans
12.010 Cook vegetables by boiling, simmering, and steaming
12.011 Cook meats, seafood, and fowl by frying
12.012 Cook meats, seafood, and fowl by stewing and braising
12.013 Cook meats, seafood, and fowl by broiling
12.014 Cook meats, seafood, and fowl by roasting or baking
12.015 Cook meats, seafood, and fowl by braising
12.016 Season and bread meats, seafood, and fowl for baking, roasting, broiling, and frying
12.017 Cook eggs by frying and scrambling
12.018 Make gravies
12.019 Make coffee
12.020 Make salads
12.021 Prepare soup stock
12.022 Prepare sandwiches
12.023 Prepare dehydrated or concentrated foods
12.024 Make soup with stock, meats, vegetables, and seasonings, as required by recipes.
12.025 Carve cooled meats
12.026 Cut, trim, and bone beef, lamb, pork, or fish into prescribed portions for steaks, chops, and fillets
12.027 Clean and care for equipment properly
12.028 Order food
12.029 Plan menus

12.030 Keep records for the purchasing of foods
12.031 Store foods
12.032 Keep a continuous inventory of food items

13.0 PLAN AND PERFORM EMERGENCY PROCEDURES—The student will be able to:

13.001 Act as a lookout to keep a person in sight who has been lost overboard
13.002 Administer first aid to prevent shock
13.003 Administer first aid to control bleeding
13.004 Administer CPR (Cardio-Pulmonary Resuscitation)
13.005 Launch a lifeboat and a life raft
13.006 Close emergency fuel shut-off valves
13.007 Extinguish Class "C" fires
13.008 Maneuver a life raft or lifeboat away from a vessel
13.009 Maneuver a vessel in order to return to the area in which a person was lost overboard
13.010 Issue life preservers for use by passengers and crew
13.011 Secure an engine room to prevent a fire from spreading
13.012 Send out distress signals
13.013 Sound the abandon-ship alarm
13.014 Train a crew to perform emergency procedures

14.0 DEMONSTRATE EMPLOYABILITY SKILLS--The student will be able to:

14.001 List sources of job openings other than public or private employment agencies
14.002 Write a letter of application for a job
14.003 Prepare a resume or personal fact sheet
14.004 List factors to consider when applying for a job
14.005 List ways of making contact with employers
14.006 Identify documents which may be required when applying for a job interview
14.007 Complete a job application form correctly
14.008 Identify appropriate dress and grooming for a job interview
14.009 Classify behaviors considered appropriate or inappropriate in a job interview situation
14.010 Describe advantages to employers and employees of being a productive worker
14.011 Explain the purpose of supervision, self-discipline, and performance evaluation
14.012 Identify appropriate response(s) to criticism from employers, supervisors, or other employees
14.013 List the consequences of frequently being absent from the job
14.014 List the consequences of frequently arriving late for work
14.015 List factors to consider when resigning from a job
14.016 Write a letter of resignation